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POWERMATIC®

Operating Instructions and Parts Manual
20-inch Disc Sander
Model DS20

Three Phase model shown

WALTER MEIER (Manufacturing) Inc.

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Part No. M-0460226
Revision G2 04/2013
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Warranty and Service

Walter Meier (Manufacturing) Inc., warrants every product it sells. If one of our tools needs service or repair, one of our Authorized Service Centers located throughout the United States can give you quick service. In most cases, any of these Walter Meier Authorized Service Centers can authorize warranty repair, assist you in obtaining parts, or perform routine maintenance and major repair on your POWERMATIC® tools. For the name of an Authorized Service Center in your area call 1-800-274-6848.

MORE INFORMATION

Walter Meier is consistently adding new products to the line. For complete, up-to-date product information, check with your local Walter Meier distributor, or visit powermatic.com.

WARRANTY

POWERMATIC products carry a limited warranty which varies in duration based upon the product.

Warranty reverts to 1 Year if above products are used for commercial, industrial or educational purposes

WHAT IS COVERED?

This warranty covers any defects in workmanship or materials subject to the exceptions stated below. Cutting tools, abrasives and other consumables are excluded from warranty coverage.

WHO IS COVERED?

This warranty covers only the initial purchaser of the product.

WHAT IS THE PERIOD OF COVERAGE?

The general POWERMATIC warranty lasts for the time period specified in the product literature of each product.

WHAT IS NOT COVERED?

The Five Year Warranty does not cover products used for commercial, industrial or educational purposes. Products with a Five Year Warranty that are used for commercial, industrial or education purposes revert to a One Year Warranty. This warranty does not cover defects due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair or alterations, or lack of maintenance.

HOW TO GET SERVICE

The product or part must be returned for examination, postage prepaid, to a location designated by us. For the name of the location nearest you, please call 1-800-274-6848.

You must provide proof of initial purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, we will repair or replace the product, or refund the purchase price, at our option.

We will return the repaired product or replacement at our expense unless it is determined by us that there is no defect, or that the defect resulted from causes not within the scope of our warranty in which case we will, at your direction, dispose of or return the product. In the event you choose to have the product returned, you will be responsible for the handling and shipping costs of the return.

HOW STATE LAW APPLIES

This warranty gives you specific legal rights; you may also have other rights which vary from state to state.

LIMITATIONS ON THIS WARRANTY

WALTER MEIER (MANUFACTURING) INC., LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG THE IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

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Warnings

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace the warning labels if they become obscured or removed.
4. This disc sander is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a disc sander, do not use until proper training and knowledge have been obtained.
5. Do not use this disc sander for other than its intended use. If used for other purposes, Walter Meier (Manufacturing) Inc., disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear approved safety glasses/face shields while using this disc sander. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
7. Before operating this disc sander, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do **not** wear gloves.
8. Wear ear protectors (plugs or muffs) during extended periods of operation.
9. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
10. Make certain the switch is in the **OFF** position before connecting the machine to the power supply.
11. Make certain the machine is properly grounded.
12. Make all machine adjustments or maintenance with the machine unplugged from the power source.
13. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

    - Lead from lead based paint.
    - Crystalline silica from bricks, cement and other masonry products.
    - Arsenic and chromium from chemically treated lumber.

    Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment, such as face or dust masks that are specifically designed to filter out microscopic particles.
14. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
15. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately.
16. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
17. Provide for adequate space surrounding work area and non-glare, overhead lighting.
18. Keep the floor around the machine clean and free of scrap material, oil and grease.
19. Keep visitors a safe distance from the work area. **Keep children away.**
20. Make your workshop child proof with padlocks, master switches or by removing starter keys.

Warnings

21. Give your work undivided attention. Looking around, carrying on a conversation and “horse-play” are careless acts that can result in serious injury.
22. Maintain a balanced stance at all times so that you do not fall or lean against the disc or other moving parts. Do not overreach or use excessive force to perform any machine operation.
23. Support the workpiece with the miter gauge; maintain control of the workpiece at all times.
24. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and safer.
25. Use recommended accessories; improper accessories may be hazardous.
26. Maintain tools with care. Follow instructions for lubricating and changing accessories.
27. Turn off the machine before cleaning. Use a brush or compressed air to remove chips or debris — do not use your hands.
28. Do not stand on the machine. Serious injury could occur if the machine tips over.
29. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
30. Remove loose items and unnecessary work pieces from the area before starting the machine.
31. After turning switch to “ON,” always allow the disc to come up to full speed before sanding or grinding. Keep hands clear of the disc.
32. Do not wet grind or polish. Never use a steady stream of water on the workpiece. Only quench the workpiece in water to cool it.
33. Do not grind or polish magnesium as it may catch on fire.
34. Replace sanding discs when they become loaded and glazed or frayed.

Familiarize yourself with the following safety notices used in this manual:

⚠CAUTION This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

⚠WARNING This means that if precautions are not heeded, it may result in serious injury or possibly even death.

Introduction

This manual is provided by Walter Meier (Manufacturing) Inc., covering the safe operation and maintenance procedures for a Powermatic Model DS20 Disc Sander. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. This machine has been designed and constructed to provide years of trouble free operation if used in accordance with instructions set forth in this manual. If there are any questions or comments, please contact either your local supplier or Walter Meier. Walter Meier can also be reached at our web site: www.waltermeier.com.

Specifications

Model Number	DS20	DS-20
Stock Number	1791276	1791264
Motor and Electricals:		
Horsepower	2HP	3HP
Phase	single	3
Voltage	230V only	230/460V (prewired 230V)
Frequency	60Hz	60Hz
FLA (full load amperage)	14 A	9.8/4.9 A
Motor speed (RPM)	1720	1720
Recommended circuit*	30 A	20/15 A
** subject to local and national electrical codes*		
Disc:		
Disc Diameter (in.)	20	20
Disc Speed (RPM)	1720	1720
Table:		
Table Tilt (deg.)	30 up, 45 down	30 up, 45 down
Table Size (in.)	27-1/2 x 10-1/2	27-1/2 x 10-1/2
Table Surface from Floor, minimum height (in.)	28-3/16	28-3/16
Table Surface from Floor, maximum height (in.)	35-7/8	35-7/8
Distance Between Disc and Table (in.)	0.20	0.20
Distance Between Mounted Abrasive and Table (in.)	0.17	0.17
Dust Collection:		
Dust Port Diameter (in.)	4	4
Dust Collection Minimum CFM Required	600	600
Dimensions and Weights:		
Overall Size (LxWxH)(in.)	31 x 28 x 48-1/2	31 x 28 x 48-1/2
Footprint (LxW)(in.)	22-1/2 x 22-1/2	22-1/2 x 22-1/2
Net Weight, approximate (lbs.)	426	426
Shipping Weight, approximate (lbs.)	529	529

The above specifications were current at the time this manual was published, but because of our policy of continuous improvement, Walter Meier reserves the right to change specifications at any time and without prior notice, without incurring obligations.

Unpacking

Open shipping container and check for shipping damage. Report any damage immediately to your distributor and shipping agent. Do not discard any shipping material until the Disc Sander is installed and running properly. Read the instruction manual thoroughly for assembly, maintenance and safety instructions.

Contents of shipping container:

1 DS20 Disc Sander
1 20" Abrasive Paper
1 Brake Assembly
1 Instruction and Parts Manual
1 Warranty Card

Installation

Tools required for assembly:

6mm hex key ("Allen wrench")

Exposed metal areas of the Disc Sander have been factory coated with a protectant. This should be removed with a soft cloth dampened with a cleaner/degreaser, or kerosene. Do not use gasoline, acetone or lacquer thinner for this purpose. Do not get solvents near plastic or rubber parts, and do not use an abrasive pad because it may scratch metal surfaces.

1. Remove the bolts holding the Disc Sander to the pallet, and use an assistant or a hoist to slide the machine off the pallet.
2. Install the machine in a level, well-lighted location. Secure it to the floor with good quality anchor bolts (not provided).
3. Leave enough space around the work area for loading and off-loading stock and general maintenance.

Attaching Sanding Paper

NOTE: It is recommended that you first inspect certain measurements at the disc/table area and make any needed adjustments (e.g., squaring the table, disc adjustment, miter gauge adjustment). This is easier to do against the bare surface of the disc, before the sanding paper is attached. See the appropriate sections below.

1. Make sure the surface of the disc is clean and free of grease or debris.
2. Lower the table all the way and push back the guard (refer to Figure 6).
3. Remove the backing from the sanding paper to expose the adhesive, and carefully apply the sanding paper to the disc on the machine. Press firmly, starting from the center and working outward, to remove any air bubbles.

Mounting the Brake Assembly

Attach the brake assembly as shown in Figure 1, using the two socket head cap screws, lock washers, and flat washers which are pre-installed on the machine. Use a 6mm hex key to tighten.

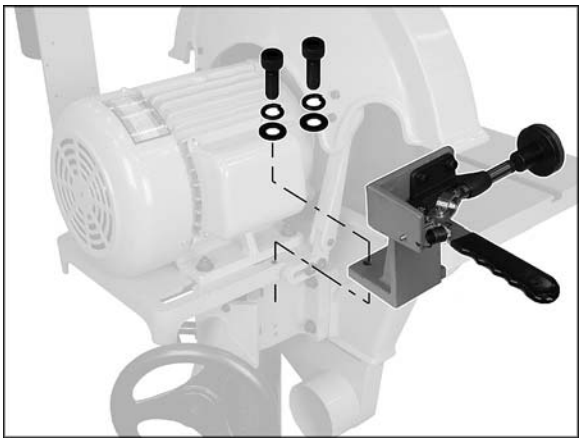


Figure 1

Dust Collection

The use of a dust collection system with the Disc Sander is strongly recommended. It will maintain shop cleanliness, and help prevent possible health hazards caused by wood dust.

Make sure the capacity of the dust collector is suitable for this size machine. Minimum 600 cubic feet per minute is recommended.

The Disc Sander has a 4" diameter dust port (Figure 2). Slide the hose of your dust collector over the outlet, and secure with a hose clamp. NOTE: Dryer vent hose is not acceptable for this purpose.

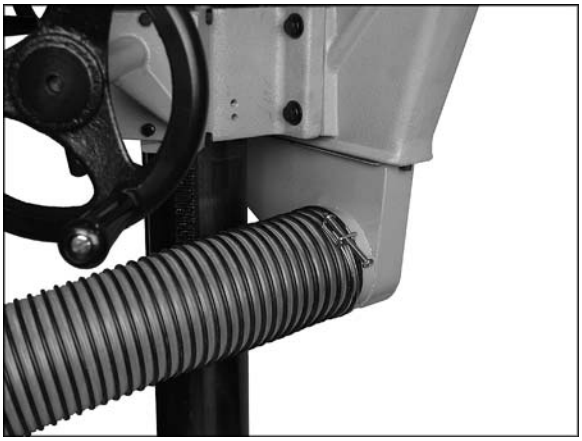


Figure 2
hose not included

Grounding Instructions

⚠WARNING Electrical connections must be made by a qualified electrician in compliance with all relevant codes. This machine must be properly grounded to help prevent electrical shock and possible fatal injury.

This machine must be grounded. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current, to reduce the risk of electric shock to the operator. Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor, with insulation having an outer surface that is green with or without yellow stripes, is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Single Phase Connections

The single phase Sander is factory wired for 230 volts only. It is not supplied with a plug. You may either install a UL/CSA-listed plug suitable for 230 volt operation, or "hard-wire" the Sander directly to a service panel (make sure a disconnect is available for the operator).

It is recommended that the *single phase* Sander be connected to a grounded and dedicated, minimum 30 amp circuit with a 30 amp circuit breaker or time delay fuse. **Local codes take precedence over recommendations.**

Disc Rotation (Single Phase Only)

The single phase model can be wired to allow disc rotation in either direction. If you wish to change disc direction, refer to the diagram inside the motor junction box. This diagram is repeated in Figure 3.

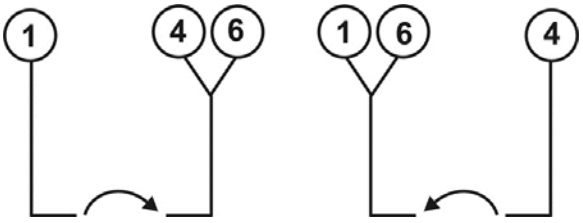


Figure 3
(Single Phase model disc reversal)

Three Phase Connections

The three phase Sander is factory wired for 230 volts. It is not supplied with a plug. You may either install a UL/CSA-listed plug suitable for 230 volt operation, or "hard-wire" the Band Saw directly to a service panel (make sure a disconnect is available to the operator).

The three phase Band Saw may be converted to 460 volt operation. Re-connect the motor leads according to the diagram inside the motor junction box. (Similar diagrams may be found at the back of this manual; however, diagrams on the machine itself should take precedence.)

It is recommended that the three phase ***230V*** Sander be connected to a grounded and dedicated, minimum 20 amp circuit with a 20 amp circuit breaker or time delay fuse. It is recommended that the three phase ***460V*** sander be connected to a grounded and dedicated, minimum 15 amp circuit with a 15 amp circuit breaker or time delay fuse. **Local codes take precedence over recommendations.**

If the Sander is to be hard-wired, make sure the fuses have been removed or the breakers have been tripped in the circuit to which the Sander will be connected. Place a warning placard on the fuse holder or circuit breaker to prevent it being turned on while the machine is being wired.

Make sure the voltage of your power supply matches the specifications on the motor plate of the Disc Sander.

Extension Cords

If an extension cord is necessary make sure the cord rating is suitable for the amperage listed on the machine's motor plate. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.

The chart in Figure 4 shows the correct size cord to use based on cord length and motor plate amp rating. If in doubt, use the next heavier gauge. The smaller the gauge number the heavier the cord.

Recommended Gauges (AWG) of Extension Cords

Amps	Extension Cord Length *					
	25 feet	50 feet	75 feet	100 feet	150 feet	200 feet
< 5	16	16	16	14	12	12
5 to 8	16	16	14	12	10	NR
8 to 12	14	14	12	10	NR	NR
12 to 15	12	12	10	10	NR	NR
15 to 20	10	10	10	NR	NR	NR
21 to 30	10	NR	NR	NR	NR	NR

*based on limiting the line voltage drop to 5V at 150% of the rated amperes.
NR: Not Recommended.

Figure 4

On-Off Switch Padlock

The sander is equipped with a push-button switch that will accept a safety padlock (not included). See Figure 5. To safeguard your machine from unauthorized operation and accidental starting by young children, the use of a padlock is highly recommended.

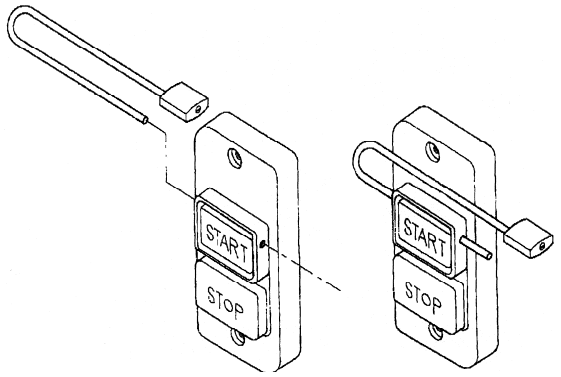


Figure 5

Adjustments

Table Movement

The work table (A, Figure 6) can be tilted 30 degrees forward and 45 degrees backward.

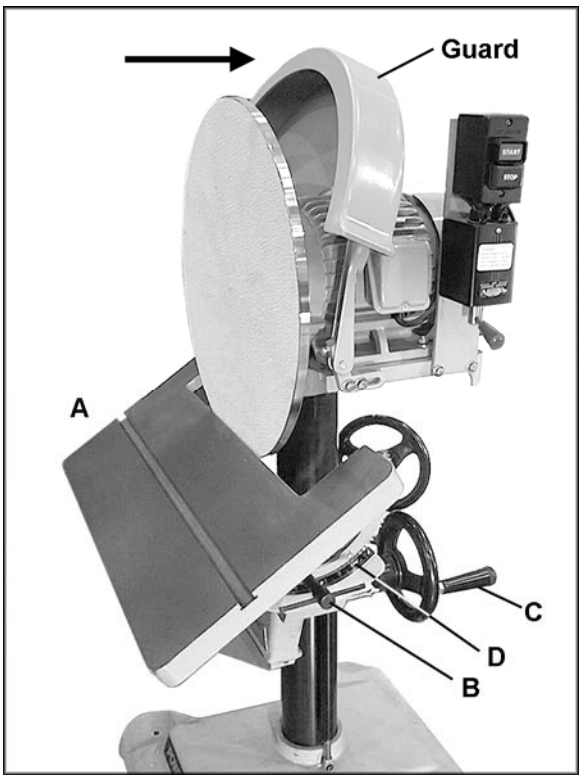


Figure 6

1. Loosen the handle (B, Figure 6) and rotate the handwheel (C, Figure 6) clockwise to tilt table backward, and counterclockwise to tilt table forward. The pointer on the trunnion scale (D, Figure 6) indicates the angle.
2. When table is positioned, re-tighten handle (B, Figure 6).

The table can also be raised or lowered on the column:

1. Loosen the lock handle (E, Figure 7) and adjust the table height by rotating the handwheel (F, Figure 7); clockwise to lower the table, counterclockwise to raise it.
2. When finished, re-tighten lock handle (E, Figure 7).

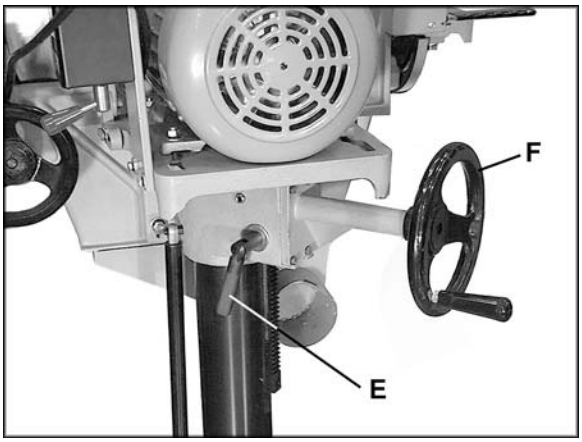


Figure 7

Squaring the Table

1. Verify the accuracy of the scale pointer by positioning the table in horizontal position, and placing a square on the table and flush against the disc. (It is easier to do this without an abrasive disc attached.) See Figure 8.
2. Adjust the table until the square is flush against both surfaces.
3. If required, adjust the pointer to the zero mark, and retighten the screw.

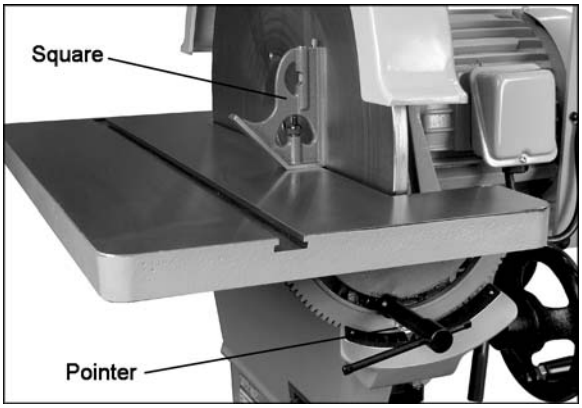


Figure 8

Replacing Abrasive Disc

The DS20 accepts standard 20" diameter cloth or paper-back sanding discs. We recommend 60 grit for coarse or rough sanding, 80 grit for general purpose medium duty sanding, and 100 grit for fine sanding.

1. Lower the table as far as possible, and push back the guard. See Figure 6.
2. Use a putty knife to remove the old abrasive from the disc. Clean the disc with solvent and allow it to dry.
3. Mount the new sanding paper. Sanding paper is available in various forms, such as adhesive backed discs and pressure-sensitive discs.
4. Raise the table, and pull the guard back over the disc before operating the sander.

Miter Gauge

The miter gauge is equipped with individually adjustable index stops at 90 degrees and 45 degrees right and left. The index stops can be adjusted by loosening the hex nut (G, Figure 9) and turning the screw (H, Figure 9).

Check the accuracy of the 90-degree stop by placing a square against the miter gauge and the disc, as shown in Figure 10.

To operate the miter gauge, loosen knob (J, Figure 9) and move the body of the miter gauge (K, Figure 9) to the desired angle. Re-tighten knob before sanding operation.

The miter gauge body is set to stop at 0 degrees and 45 degrees left or right. To move the gauge body beyond these points, the stop (L, Figure 9) must be flipped out of the way.

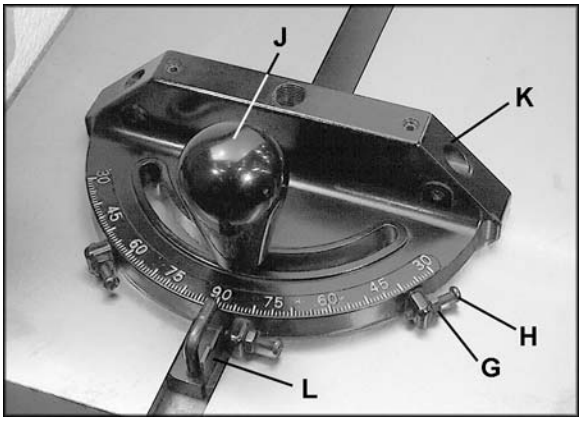


Figure 9

Operation

Raise the table into position. After turning on the sander, allow the disc to come up to full speed before beginning to sand.

Figure 10

Slide the miter gauge into the table slot. The miter gauge can be used from either direction to facilitate the position of the workpiece.

Use both hands to hold the workpiece against the miter gauge and sanding disc.

Keep the workpiece on the side of the disc that is rotating downward (see Figure 11). This will prevent the workpiece being thrown upward by the rotational force of the disc.

When sanding long workpieces, use supports which are the same height as the sander table.

Figure 11

Forward-Reverse Switch (3-Phase)

The three phase model of the DS20 has a Forward-Reverse switch (Figure 12). When changing direction with the Forward-Reverse switch, turn the lever to the OFF position and allow the disc to come to a complete stop. (Use the brake for immediate stop). Then turn the lever to the opposite direction, and allow the disc to come up to speed.

Figure 12
(3 Phase model only)

Brake

Pull the brake handle until the pad contacts the rotating disc.

⚠CAUTION Apply the brake only when the switch is OFF (On the three-phase model, only when the main switch is OFF, or the Forward/Reverse switch is OFF). Damage to the machine can occur if the brake is applied while the switch is ON.

Maintenance

⚠WARNING Before doing any maintenance on the machine, disconnect it from the electrical supply by pulling out the plug or switching off the main switch! Failure to comply may cause serious injury.

The DS20 Sander requires minimal maintenance. Periodically, make sure the rack and the trunnions on both sides of the table (Figure 13) are lubricated with a good grade, non-hardening grease.

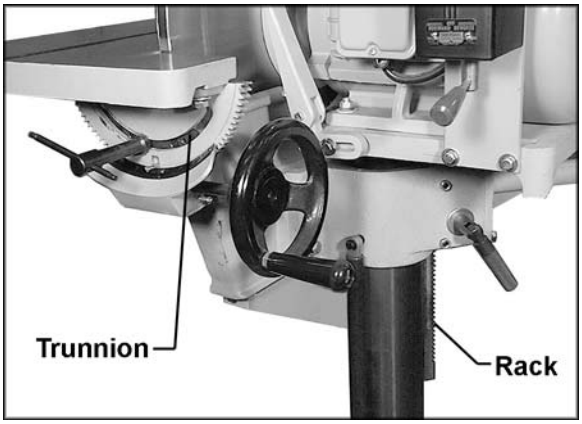


Figure 13

The table surface must be kept clean and free of rust for best results. If rust appears, remove it using a mixture of household ammonia, a good commercial detergent and #000 steel wool. Alternatively, commercial rust removers can be found at many hardware stores.

Apply a light, protective coating over the table, such as paste wax. Products in aerosol form are also available in hardware stores and supply catalogs. Whatever method is chosen, the coating should protect the metal and provide a smooth surface, without staining the workpiece.

If the power cord is worn, cut or damaged in any way, have it replaced immediately.

Troubleshooting

Trouble	Probable Cause	Remedy
Machine will not start/restart or repeatedly trips circuit breakers or blows fuses.	Machine not connected to power source.	Verify machine is connected to power.
	Fuse blown, or circuit breaker tripped.	Replace fuse, or reset circuit breaker.
	Cord damaged.	Replace cord.
	Extension cord too light or too long.	Use adequate size extension cord.
	Building circuit breaker trips or fuse blows.	Verify that sander is on a circuit of correct size. If circuit size is correct, there is probably a loose electrical lead.
	Loose electrical connections.	Go through all the electrical connections on the edge sander including motor connections, verifying the tightness of each. Look for any signs of electrical arcing which is a sure indicator of loose connection or circuit overload.
	Switch or motor failure (how to distinguish).	If you have access to a voltmeter, you can separate a switch failure from a motor failure by first, verifying incoming voltage at 220+/-10% and second, checking the voltage between switch and motor at 220+/-10%. If incoming voltage is incorrect, you have a power supply problem. If voltage between switch and motor is incorrect, you have a switch problem. If voltage between switch and motor is correct, you have a motor problem.
	Motor failure.	If electric motor is suspect, you have two options: Have a qualified electrician test the motor for function or remove the motor and take it to a qualified electric motor repair shop and have it tested.
	On/Off switch failure. (or Forward/Reverse switch on 3 phase model).	If the switch is suspect, you have two options: Have a qualified electrician test the switch for function, or purchase a new switch and establish if that was the problem on changeout.
Disc won't come up to speed.	Extension cord too light or too long.	Use adequate size extension cord.
	Low (incoming) voltage.	Contact qualified electrician.
	Excessive bite, or feed pressure too great.	Allow sanding disc to cut freely, do not force.
Excessive replacement of sanding paper.	Too much pressure being used during cuts.	Reduce pressure.
	Not using full width of belt.	Stroke across the belt using full width.
Machine vibrates excessively.	Sander base not level with floor.	Shim if necessary.
	Not secured to the floor.	Use lag screws through holes in base to secure machine to the floor.
	Improper motor mounting.	Check and adjust mounting.
Sanding marks on workpiece.	Sanding paper too coarse for required finish.	Use proper grit. Coarser grits for stock removal, and finer grits for finish work.
	Workpiece sanded across grain.	When surface sanding, use fine sanding disc paper then finish by hand, working in direction of grain.
Sanding grains quickly rub off paper.	Sanding paper has lost its original properties.	Do not store sanding paper in extremely dry or high-temperature areas. Do not fold sanding disc papers, store them flat.

Trouble	Probable Cause	Remedy
Sanding paper becomes glazed.	Sanding painted surface.	Use open-end grain/flint sanding paper.
	Wood is wet or gummy.	No cure. Use different stock.
Burn marks on workpiece.	Wrong sanding paper surface.	Use coarser grit for stock removal.
	Feed pressure too great.	Do not force workpiece into disc. Use just enough pressure, and let the sanding disc do the work.
Sanding paper burns, or clogs quickly.	Too much pressure, sanding disc biting too deeply into workpiece.	Adjust for slight sanding action and make several passes.
Workpiece pulled from hand.	No support for workpiece.	Use miter gauge. Keep workpiece firmly down against table.
Sanded edge is not square.	Result of freehand sanding.	Keep workpiece flat on table at all times when a square edge is desired. Use miter gauge to ensure workpiece is square with sanding disc.
	Table scale inaccurate.	Check table alignment to disc with a machinist's square. It should be 90 degrees. Adjust pointer and table angle if necessary.

Replacement Parts

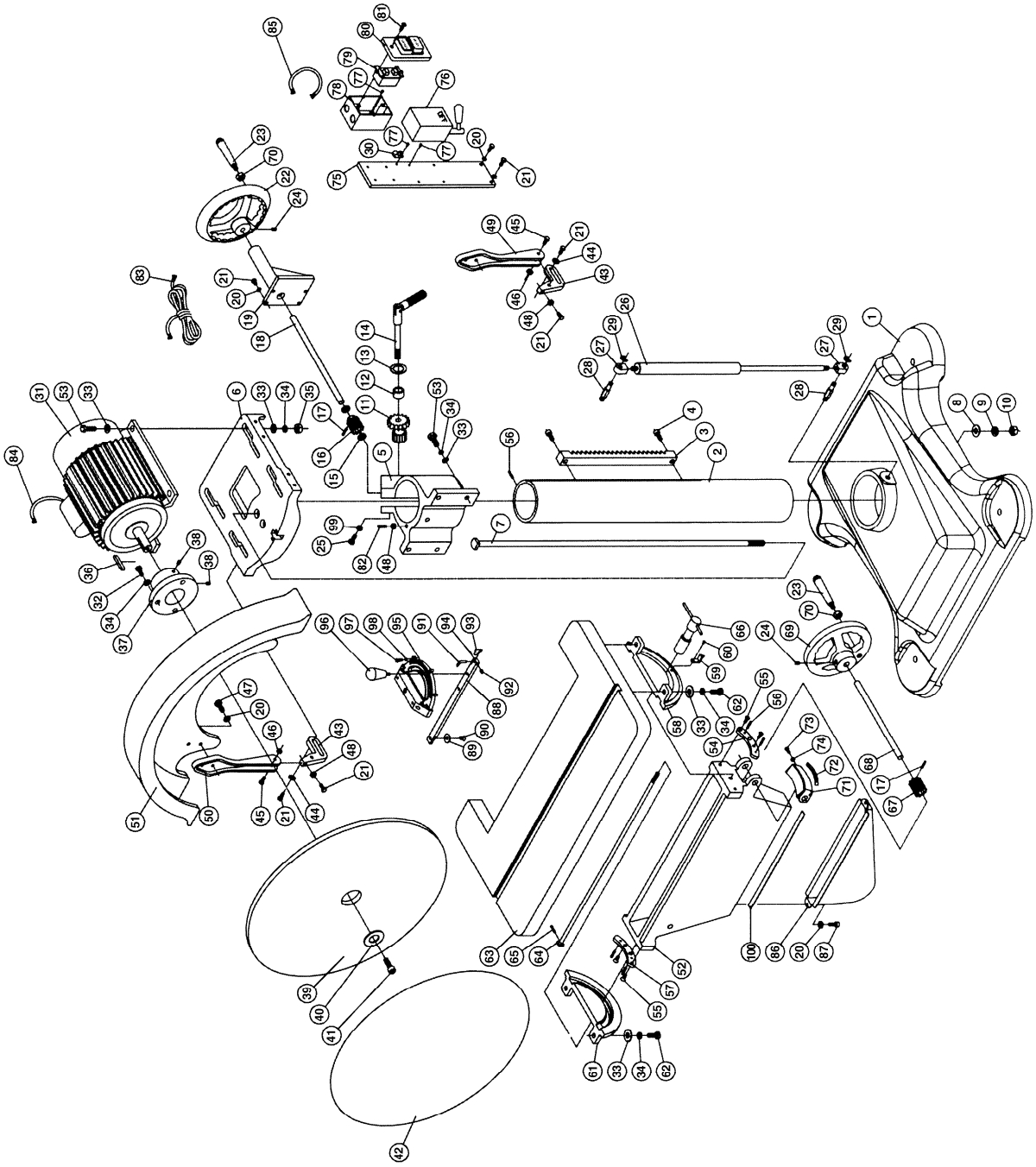
Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848, Monday through Friday (see our website for business hours, www.powermatic.com). Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Parts List: DS20 Disc Sander

Index No.	Part No.	Description	Size	Qty
1	6295560	Base		1
2	6295561	Column		1
3	6295562	Rack		1
4	6295563	Socket Head Cap Screw	5/16”-18 x 1/2"	2
5	6295564	Column Support		1
6	6295565	Motor Base		1
7	6295566	Stud		1
8	6295567	Flat Washer	1/2"	1
9	6295568	Spring Washer	1/2"	1
10	6295569	Hex Nut	1/2"	1
11	6295570	Worm Gear		1
12	6295571	Bushing		1
13	6295572	Flat Washer		1
14	6295573	Lock Handle Assembly		1
15	6295574	Bushing		1
16	6295575	Table Lifting Worm		1
17	6295576	Roll Pin	3 x 20mm	2
18	6295577	Shaft		1
19	6295578	Shaft Support Bracket		1
20	6295579	Spring Washer	1/4”	10
21	6295580	Hex Head Screw	1/4"-20 x 1"	10
22	6295581	Handwheel		1
23	6295582	Handle		2
24	6295583	Set Screw	5/16"-18 x 3/8"	4
25	6295584	Hex Head Screw	5/16"-18 x 1-3/4"	2
26	6295585	Hydraulic Cylinder		1
27	6295586	Cylinder Head		2
28	6295587	Cylinder Fitting		2
29	6295588	E-Ring		2
30	6295589	Wire Protector		1
31	6295590	Motor	2HP, 1Ph, 230V	1
	6295591	Motor	3HP, 3Ph, 230/460V	1
	DS20-SC	Start Capacitor (not shown)	500MFD, 250VAC	1
	DS20-RC	Run Capacitor (not shown)	40uf, 250VAC	1
	DS20-MF	Motor Fan and Cover (not shown)		1
32	6295592	Hex Head Screw	3/8"-16 x 1-1/2"	3
33	6295593	Flat Washer	3/8"	16
34	6295594	Spring Washer	3/8"	15
35	6295595	Hex Nut	3/8"	4
36	6295596	Key	5 x 5 x20mm	1
37	6295597	Hub		1
38	6295598	Set Screw	3/8"-16 x 3/8"	2
39	6295602	Disc		1
40	6295600	Disc Insert		1
41	6295601	Cap Screw	5/16"-18 x 1"	1
42		Abrasive Disc (local purchase)	20”Dia., 100 Grit	1
43	6295603	Disc Guard Bracket		2
44	6295604	Flat Washer	1/4"	2
45	6295605	Hex Head Screw	1/4"-20 x 1-1/4"	2
46	6295606	Lock Nut	1/4"	2
47	6295607	Hex Head Screw	1/4"-20 x 5/8"	2
48	6295608	Hex Nut	1/4"	3
49	6295609	Disc Guard Arm (R)		1
50	6295610	Disc Guard Arm (L)		1
51	6295611	Disc Guard		1
52	6295612	Solid Segment		1
53	6295613	Hex Head Screw	3/8"-16 x 1-3/4"	8

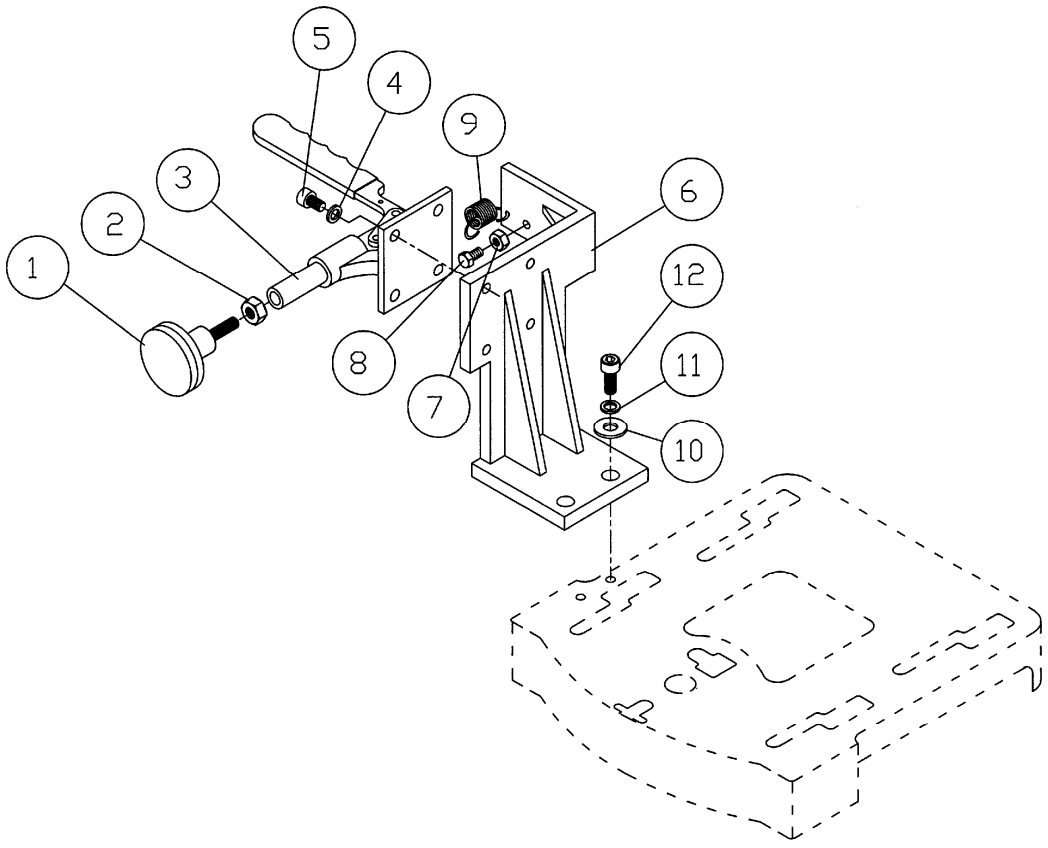
Index No.	Part No.	Description	Size	Qty
54	6295614	Pilot, Right		1
55	6295615	Phillip Head Screw	1/4"-20 x 1/2"	4
56	6295616	Spring Pin	5 x 20mm	5
57	6295617	Pilot, Left		1
58	6295618	Gear Segment		1
59	6295619	Pointer		1
60	6295620	Round Head Screw		1
61	6295621	Trunnion		1
62	6295622	Hex Head Screw	3/8"-16 x 1"	4
63	6295623	Table		1
64	6295624	Bolt		1
65	6295625	Roll Pin	3 x 16mm	1
66	6295626	Table Lock Handle		1
67	6295627	Table Tilting Worm		1
68	6295628	Shaft		1
69	6295629	Handwheel		1
70	6295630	Hex Nut	3/8"	2
71	6295631	Gear Housing		1
72	6295632	Scale		1
73	6295633	Hex Head Screw	3/16"-24 x 3/4"	2
74	6295634	Hex Nut	3/16"	2
75	6295635	Switch Plate		1
76	6295636	Switch, Fwd/Rev (3 Phase only)		1
77	6295637	Round Head Screw	3/16"-24 x 3/4"	9
78	6295638	Switch Cover		1
79	6295639	Switch, On/Off		1
80	6295640	Switch Faceplate		1
81	6295641	Tap Screw		2
82	6295642	Set Screw	1/4"-20 x 1"	1
83	6295643	Power Cord		1
84	6295644	Motor Wire		1
85	6295645	Switch Wire (3 Phase only)		1
86	6295646	Dust Chute		1
87	6295647	Cap Screw	1/4"-20 x 1/4"	2
	6295663	Miter Gauge Assembly (includes index # 88 through 98)		1
88	6295648	Guide Bar		1
89	6295649	Guide Disc		1
90	6295650	Phillip Head Screw	1/4"-20 x 1/4"	1
91	6295651	Pointer		1
92	6295652	Set Screw	1/4"-20 x 1/4"	1
93	6295653	Stop		1
94	6295654	Roll Pin	3 x 6mm	1
95	6295655	Miter Gauge Body		1
96	6295656	Knob		1
97	6295657	Round Head Screw	M4 x 0.7 x 20	3
98	6295658	Hex Nut	M4	3
99	6295659	Hex Nut	5/16"	2
100	6295660	Sponge		1

Exploded View: DS20 Disc Sander



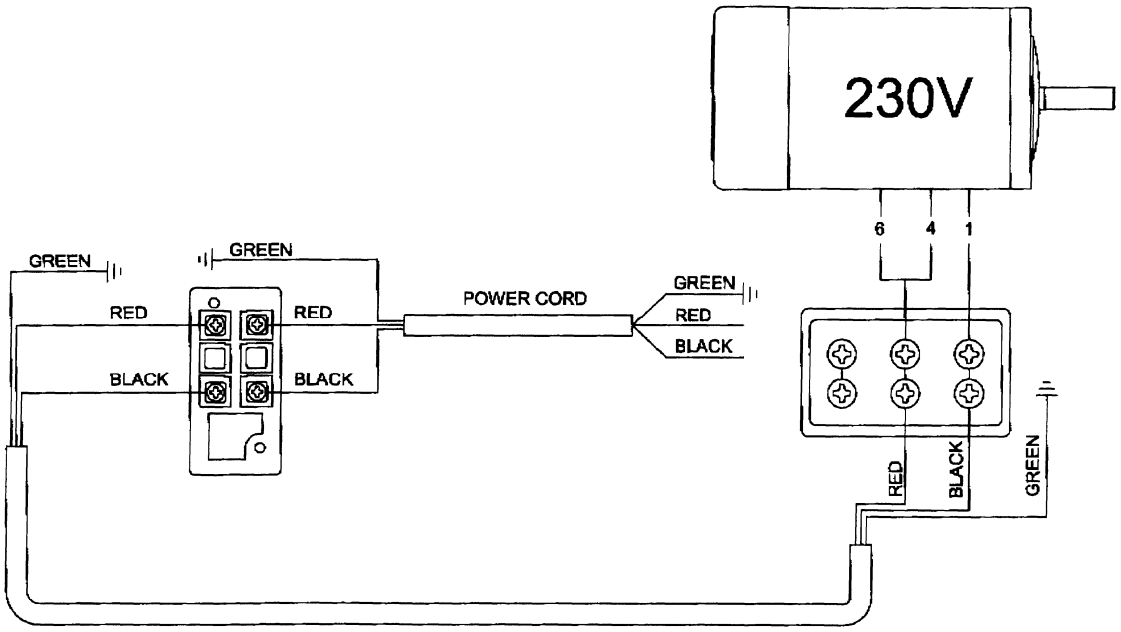
Parts List: Brake Assembly

Index No.	Part No.	Description	Size	Qty
.....	DS20-200	Brake Assembly (includes index #1 through 12)	.....	.....
1	DS20-201	Brake Pad		1
2	TS-2311081	Hex Nut	M8	1
3	DS20-203	Push Body		1
4	TS-2361061	Lock Washer	M6	4
5	TS-1503041	Socket Head Cap Screw	M6 x 16	4
6	DS20-206	Bracket		1
7	TS-1540031	Hex Nut	M5	1
8	TS-2205301	Hex Cap Screw	M5 x 30	1
9	DS20-209	Spring		1
10	TS-1550061	Flat Washer	M8	2
11	TS-2361081	Lock Washer	M8	2
12	TS-1504051	Socket Head Cap Screw	M8 x 25	2

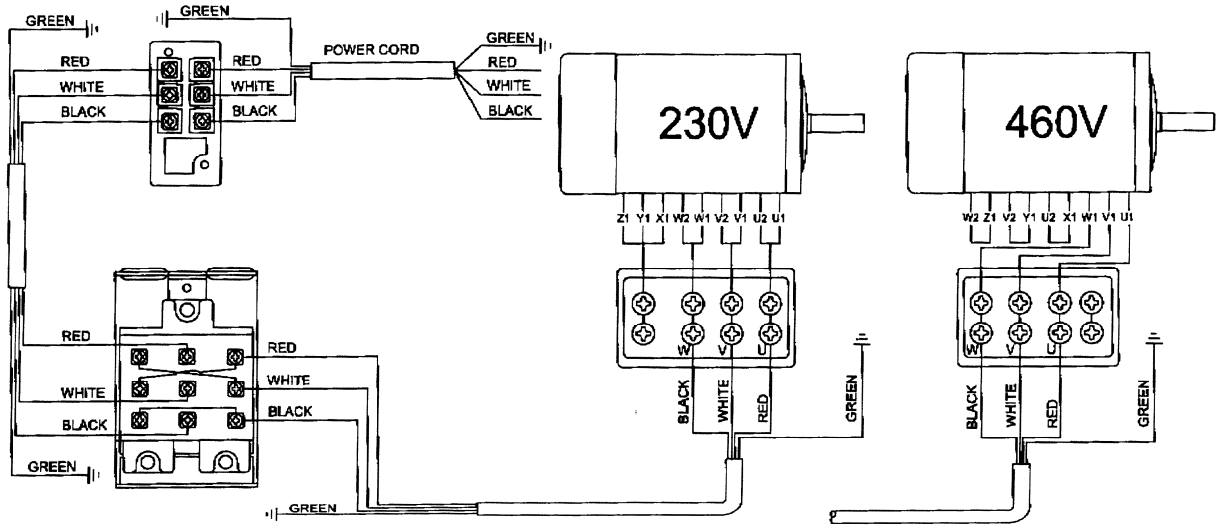


Electrical Connections

230V, Single Phase



230/460V, 3 Phase



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